

Date: Monday, 22/09/2008 2:01:00 PM
 User: Linda Lacelle

Process Sheet

| | | | | | |
|-----------------------|--|------------|------------------|--------------------|-------------------------|
| Customer | : CU-DAR001 Dart Helicopters Services | | Drawing Name | : BRACKET ASSEMBLY | |
| Job Number | : 42193-2 | | Part Number | : D3183043 | |
| Estimate Number | : 10281 | | Drawing Number | : D3183 REV C1 | |
| P.O. Number | : | | Project Number | : N/A | |
| This Issue | : 22/09/2008 | S.O. No. : | Drawing Revision | : C1 | |
| Prsht Rev. | : NC | | Material | : | |
| First Issue | : // | Type | : MACHINED PARTS | | |
| Previous Run | : 39924 | | Due Date | : 25/10/2008 | Qty: <i>25</i> Um: Each |
| Written By | : | | split 15 | | |
| Checked & Approved By | : | | | | |
| Comment | : Est Rev: Pick:A 04.02.18 New issue: KJ/DS Est Rev:B Changed Mat Size 08-06-26 JLM | | Verified By:EC | | |

Additional Product

Job Number:



| Seq. #: | Machine Or Operation: | Description: |
|--|-----------------------|---|
| 1.0 | M174B1500X02250 | 17-4 SS Bar 1.50 X2.250 (25) |
| Comment: Qty.: 0.4812 f(s)/Unit Total : 12.0304 f(s) Material: 17-4 SS Bar per AMS 5604/5643 (M17-4-B1.500x02.25) Identify for D3183-043 Batch: <i>m108309 x 25</i> mmf 08/09/23 | | |
| 2.0 | BAND SAW | BAND SAW (25) |
| Comment: BAND SAW <i>2.250</i> Cut blanks: (1.500" x 2.000") 5.500" long <i>mmf 08/09/24</i> | | |
| 3.0 | HAAS1 | HAAS CNC VERTICAL MACHINING #1 (25) <i>PG Issue P.O. 7241 Globus 08/09/24</i> |
| Comment: HAAS CNC VERTICAL MACHINING #1 1-Machine D3183-3 as per Folio FA322 and Dwg D3183 Identify as D3183-3 2-Deburr 3-Scribe batch number <i>mmf 08/12/08 /J.F. (15)</i> | | |

| | | |
|---|------------|---|
| <i>RG</i> | <i>502</i> | INSPECT PARTS AS THEY COME OFF MACHINE <i>Review & Inspect for transit damage</i> <i>Ensure CofC attached</i> <i>mmf 08/12/08 /J.F. (15)</i> |
| Comment: INSPECT PARTS AS THEY COME OFF MACHINE <i>mmf 08/12/08 /J.F. (15)</i> | | |

W/O:

WORK ORDER CHANGES

| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
|------|------|------------------|----|------|-----|-------------------------------------|--------------------------|
| | | | | | | | |
| | | | | | | | |

Part No: D3183 043 PAR #: N/A Fault Category: Prod/Machined Part NCR: Yes No DQA: Date: 09/01/05
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: Date: 09/01/05

| WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | | |
|----------------------------------|------|--|-----------------------------|---|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 09/12/17 | 3.0 | Tap broke in Hole Scraping a 1/4" part. R.C: Process (shank too thin above the tap) & tool used | Initial Chief Eng | Scraped, replace qty 1 Review not different Belt or taps. They only come one size. | MJ 08/12/17 | 08/12/17 | Initial | 08/12/17 |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 22/09/2008 2:01:00 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 42193

Part Number: D3183043

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC5 SECOND CHECK



8

Comment: SECOND CHECK

Inspect level *B*

J.L. 08/12/03

6.0 D312121 Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

| Qty Part Number | Description | Batch |
|-----------------|-------------|---------------|
| 2 D3121-21 | Bolt | <i>B43536</i> |

7.0 D3183045 Bearing Assembly



EP08/12/29

Comment: Qty.: 2.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

| Qty Part Number | Description | Batch |
|-----------------|-------------|-------------------|
| 2 D3183-045 | Bearing Ass | <i>B42179 202</i> |

B43538 102

EP08/12/29

8.0 SMALL FAB 1. SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-043 as per Dwg D3183.

9.0 QC5 INSPECT WORK TO CURRENT STEP



EP08/12/29 15

08.12.29

15

Comment: INSPECT WORK TO CURRENT STEP

10.0 PACKAGING 1. PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *ST 233 A*

8808712/30 15

11.0 QC21 FINAL INSPECTION/W/O RELEASE



15

Comment: FINAL INSPECTION/W/O RELEASE

F09/01/05

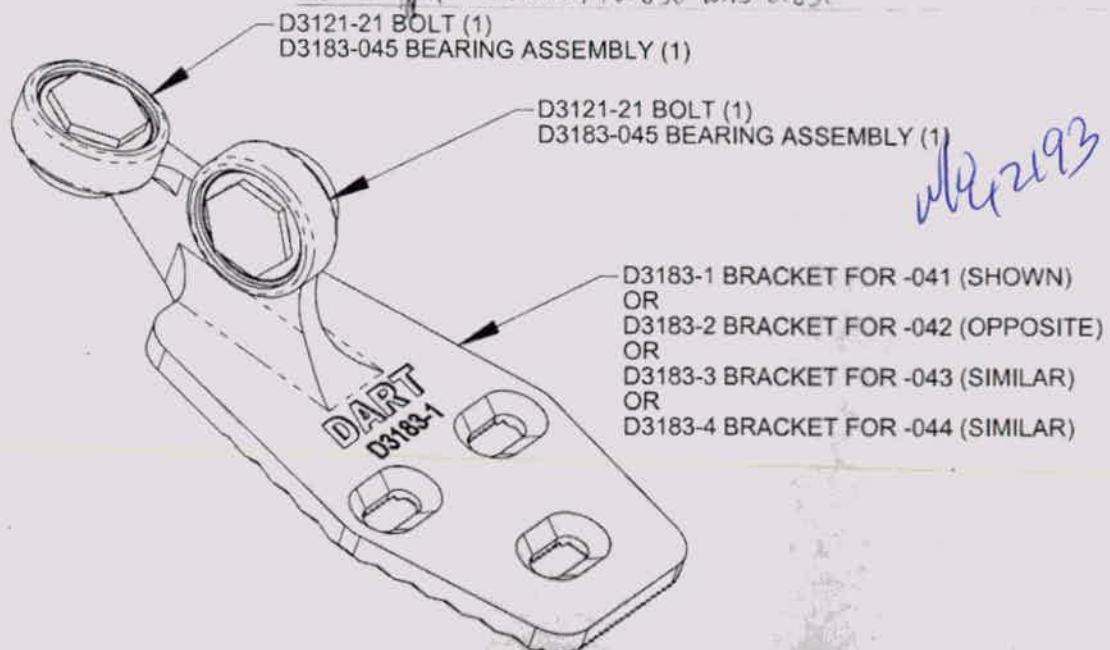
Job Completion



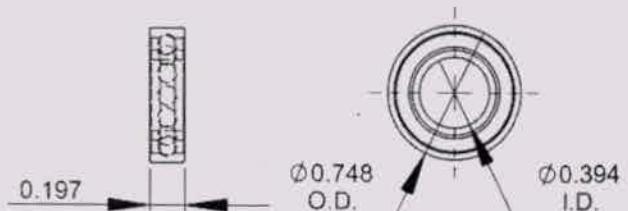
MNF 08-12-31

DART

| | | | |
|---------|----------|--|--------------|
| DESIGN | DRAWN BY | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | APPROVED | DRAWING NO. | REV. C |
| | | D3183 | SHEET 1 OF 4 |
| DATE | 04.02.17 | TITLE | SCALE |
| | | BRACKET ASSEMBLY | 1:1 |
| A | 03.01.24 | NEW ISSUE | |
| B | 03.06.17 | REMOVE BEARING; 1.012 WS 0.882 | |
| C | 04.02.17 | ADD -045/-9; 0.182 WAS 0.431 | |
| C1 | 04.02.17 | 0.830 WAS 0.850 | |

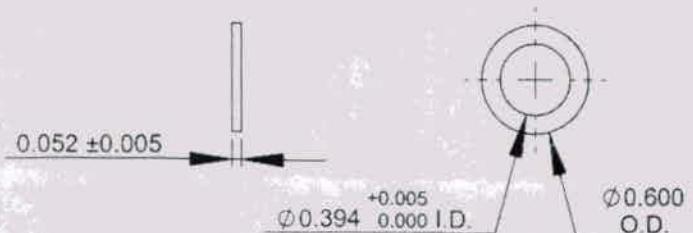
RELEASED
04.03.01

D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



**D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

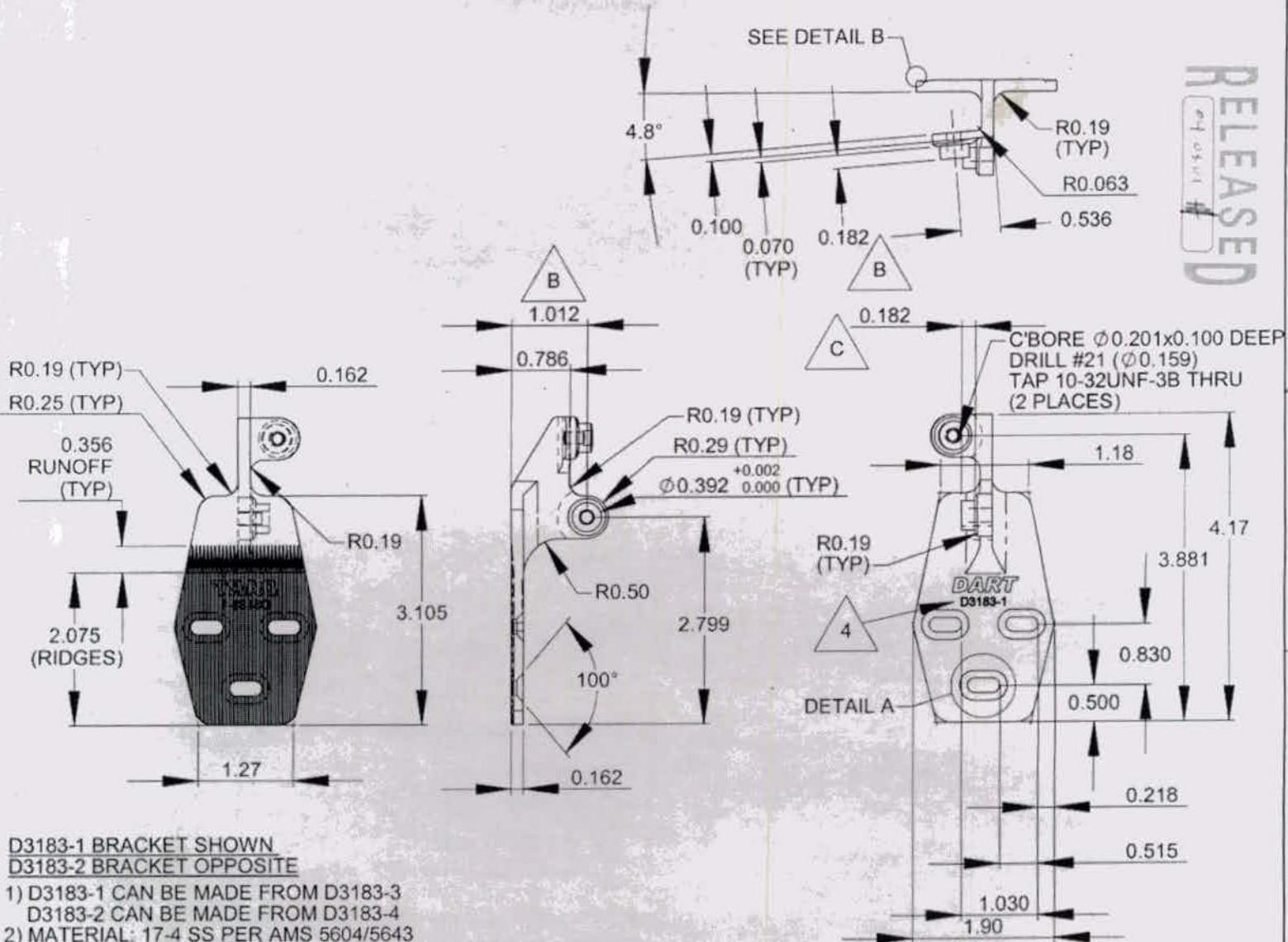
- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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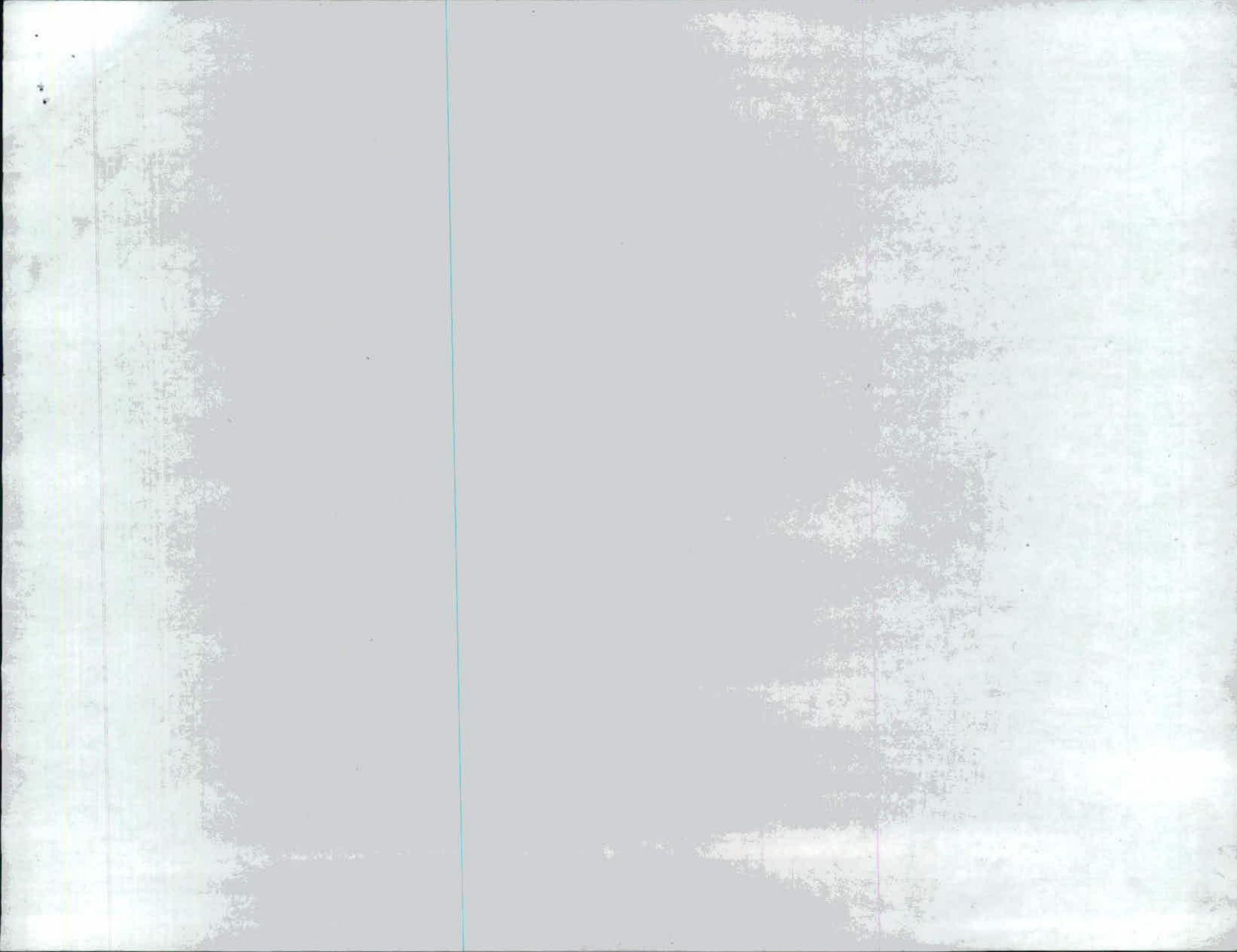
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D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS
OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES



| | | | |
|---------|------------------|-----------------------------|-------|
| DESIGN | DRAWN BY | DART AEROSPACE LTD | |
| CHECKED | APPROVED | HAWKESBURY, ONTARIO, CANADA | |
| DATE | 04.02.17 | DRAWING NO. | D3183 |
| TITLE | BRACKET ASSEMBLY | SHEET 2 OF 4 | REV C |
| SCALE | 1:2 | | |



RELEASED
24-02-01
#

D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)

**D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)**

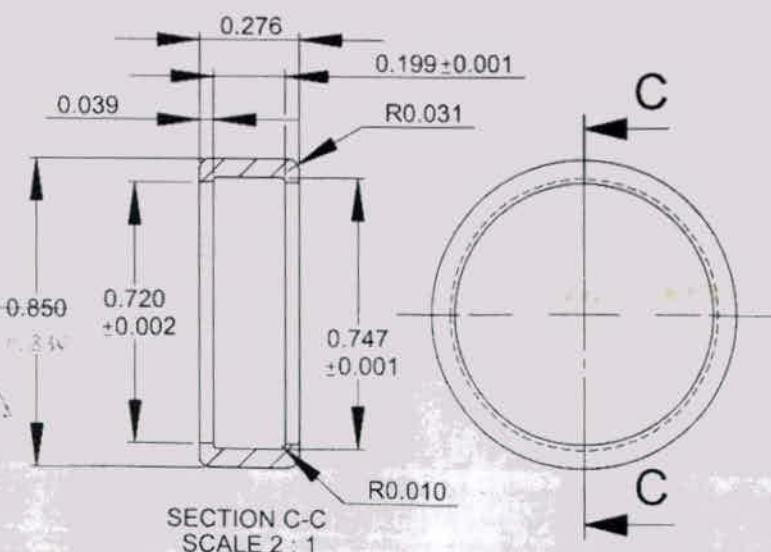
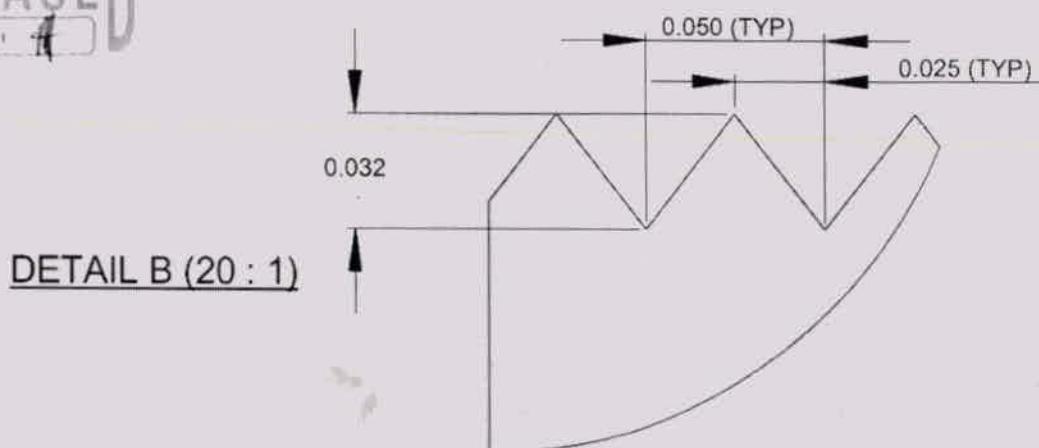
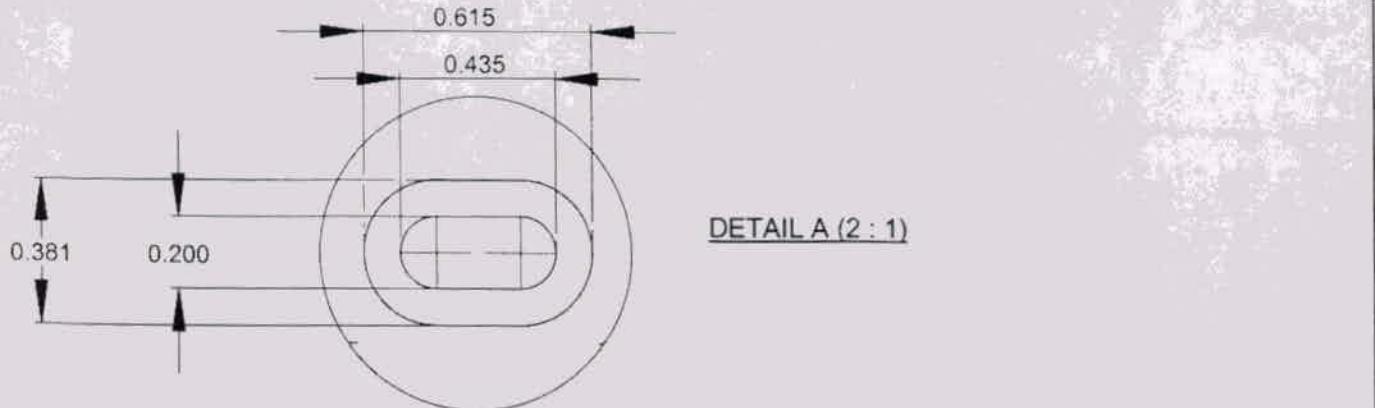
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DART

| | | | |
|--------------|------------------|--|--------------|
| DESIGN | DRAWN BY | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | APPROVED | DRAWING NO. | REV. C |
| ✓ | ✓ | D3183 | SHEET 3 OF 4 |
| DATE | TITLE | SCALE | |
| 04.02.17 | BRACKET ASSEMBLY | 1:2 | |

DART

| | | | |
|---------|----------|---------------------------|--------------|
| DESIGN | DRAWN BY | DART AEROSPACE LTD | |
| CHECKED | APPROVED | DRAWING NO. | REV. C |
| DATE | 04.02.17 | D3183 | SHEET 4 OF 4 |

**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

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| | | | |
|-----------------------|---------|--------------|-------------|
| DART AEROSPACE LTD | | Work Order: | |
| Description: Bracket | | Part Number: | D3183-3 |
| Inspection Dwg: D3183 | Rev: C1 | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| R0.190 | +/-0.030 | R.187 | / | | | |
| R0.063 | +/-0.010 | R.063 | ✓ | | | |
| 0.182 | +/-0.010 | .178 | ✓ | | | |
| 0.070 | +/-0.010 | .073 | ✓ | | | |
| 0.100 | +/-0.010 | .099 | ✓ | | | |
| Ø0.201 x 0.100 | +/-0.010 | Ø.197 x .103 | ✓ | | | |
| 0.182 | +/-0.010 | .178 | ✓ | | | |
| 5.32 | +/-0.030 | 5.32 | ✓ | | | |
| 5.036 | +/-0.010 | 5.035 | ✓ | | | |
| 2.120 | +/-0.010 | 2.120 | ✓ | | | |
| 1.290 | +/-0.010 | 1.285 | ✓ | | | |
| 0.365 | +/-0.010 | .364 | ✓ | | | |
| 0.218 | +/-0.010 | .210 | ✓ | | | |
| 1.030 | +/-0.010 | 1.030 | ✓ | | | |
| 1.90 | +/-0.030 | 1.88 | ✓ | | | |
| 1.012 | +/-0.010 | 1.016 | ✓ | | | |
| Ø0.201 x 0.100 | +/-0.010 | Ø.206 x .097 | ✓ | | | |
| 0.786 | +/-0.010 | .786 | ✓ | | | |
| Ø0.392 | +0.002/-0.000 | .393 | ✓ | | | |
| R0.19 | +/-0.030 | R.187 | ✓ | | | |
| 3.954 | +/-0.010 | 3.956 | ✓ | | | |
| 0.162 | +/-0.010 | .162 | ✓ | | | |
| R0.19 | +/-0.030 | R.187 | ✓ | | | |
| R0.25 | +/-0.030 | R.25 | ✓ | | | |
| 4.26 | +/-0.030 | 4.26 | ✓ | | | |
| 2.080 | +/-0.030 | 2.110 | ✓ | | | |
| 1.155 | +/-0.010 | 1.150 | | | | |
| 0.162 | +/-0.010 | .166 | ✓ | | | |
| 0.36 | +/-0.030 | .360 | ✓ | | | |
| ~0.615 | +/-0.010 | .615 | ✓ | | | |
| 0.435 | +/-0.010 | .438 | ✓ | | | |
| 0.200 | +/-0.010 | .205 | ✓ | | | |
| 0.381 | +/-0.010 | .381 | ✓ | | | |
| 0.032 | +/-0.010 | .031 | ✓ | | | |

| | | | | | |
|--------------|------------|-------------|-----------|---------------------|-----|
| Measured by: | <i>mmr</i> | Audited by: | <i>JL</i> | Prototype Approval: | N/A |
| Date: | 08/12/23 | Date: | 08/12/23 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|---------------------------|-------------------|-----------|
| A | 03.11.12 | New Issue P/O D3183-043 | KJ/RF | |
| B | 04.03.15 | Changes as per revision C | KJ/JLM/RF | |
| C | 06.03.09 | Dwg Rev update | KJ/JLM | |
| D | 08.01.28 | 0.182 dimension removed | KJEC/DD <i>AF</i> | <i>ND</i> |

